



PRODUCT NAME : CMOS Camera (OV7670)
Module for Arduino/Raspberry-P
i/Robotics

PRICE : Rs 499.00
SKU : RM0670



DESCRIPTION

Description:

The OV7670/OV7171 CAMERACHIP™ is a low voltage CMOS image sensor that provides the full functionality of a single-chip VGA camera and image processor in a small footprint package. The OV7670/OV7171 provides full-frame, sub-sampled or windowed 8-bit images in a wide range of formats, controlled through the Serial Camera Control Bus (SCCB) interface.

This product has an image array capable of operating at up to 30 frames per second (fps) in VGA with complete user control over image quality, formatting and output data transfer. All required image processing functions, including exposure control, gamma, white balance, color saturation, hue control and more, are also programmable through the SCCB interface. In addition, Omni Vision CAMERACHIPS use proprietary sensor technology to improve image quality by reducing or eliminating common lighting/electrical sources of image contamination, such as fixed pattern noise (FPN), smearing, blooming, etc., to produce a clean, fully stable color image.

Features:

- High sensitivity for low-light operation
- Low operating voltage for embedded portable apps
- Standard SCCB interface compatible with I2C interface
- Supports VGA, CIF, and resolutions lower than CIF for RGB (GRB 4:2:2, RGB565/555), YUV (4:2:2) and YCbCr (4:2:2) formats
- VarioPixel® method for sub-sampling
- Automatic image control functions including: Automatic Exposure Control (AEC), Automatic Gain Control (AGC), Automatic White Balance (AWB), Automatic Band

- Filter (ABF), and Automatic Black-Level Calibration (ABLC)
- Image quality controls including colorsaturation, hue, gamma, sharpness (edge enhancement), and anti-blooming
- ISP includes noise reduction and defect correction
- Supports LED and flash strobe mode
- Supports scaling
- Lens shading correction
- Flicker (50/60 Hz) auto detection
- Saturation level auto adjust (UV adjust)
- Edge enhancement level auto adjust
- De-noise level auto adjust

Specifications:

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|---------------------|-------------|
| Array Element (VGA) | 640 x 480 |
| Digital Core | 1.8VDC ±10% |

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|------------------------------------|--------------------------------|--|
| Power Supply | Analog | 2.45V to 3.0V |
| | I/O | 1.7V to 3.0V |
| Power Requirements | Active | TBD |
| | Standby | < 20 μ A |
| Temperature Range | Operation | -30°C to 70°C |
| | Stable Image | 0°C to 50°C |
| Output Formats (8-bit) | | <ul style="list-style-type: none"> • YUV/YCbCr 4:2:2 • RGB565/555 • GRB 4:2:2 • Raw RGB Data |
| Lens Size | 1/6" | |
| Chief Ray Angle | 24° | |
| Maximum Image Transfer Rate | 30 fps for VGA | |
| Sensitivity | 1.1 V/Lux-sec | |
| S/N Ratio | 40 dB | |
| Dynamic Range | TBD | |
| Scan Mode | Progressive | |
| Electronics Exposure | Up to 510:1 (for selected fps) | |
| Pixel Size | 3.6 μ m x 3.6 μ m | |
| Dark Current | 12 mV/s at 60°C | |
| Well Capacity | 17 K e | |
| Image Area | 2.36 mm x 1.76 mm | |
| Package Dimensions | 3785 μ m x 4235 μ m | |

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